

J. W. Coburn,

Shoe Sole.

N^o 48,481.

Patented June 27, 1865.

Fig. 1.

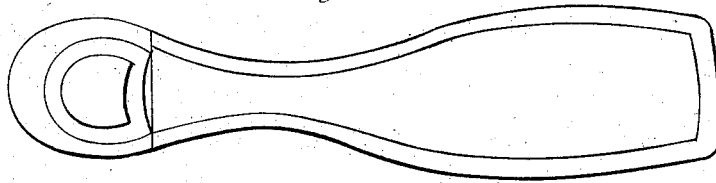


Fig. 2.

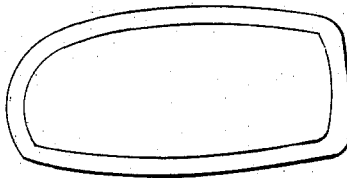


Fig. 3.

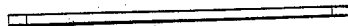
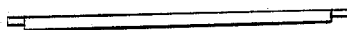


Fig. 4.



Witnesses:

*Henry A. Hine
Chas. E. Earle*

Inventor:

John W. Coburn

UNITED STATES PATENT OFFICE.

JOHN W. COBURN, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO HIMSELF
AND O. F. CASE, OF SAME PLACE.

IMPROVED WATER-PROOF SOLES.

Specification forming part of Letters Patent No. **48,481**, dated June 27, 1865.

To all whom it may concern:

Be it known that I, JOHN W. COBURN, of New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in the Manufacture of Water-Proof Soles for Boots and Shoes; and I do hereby declare the following to be a full, clear, and exact description of the same, when taken in connection with the accompanying drawings and the letters of reference marked thereon, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a view of whole sole and heel; Fig. 2, a half-sole; Fig. 3, a section of the same; and Fig. 4, section of half-sole, the rubber thicker than its edging.

My invention relates to an improvement in the manufacture of water-proof soles for boots and shoes, whereby the water-proof sole may be secured to the boot or shoe in the usual manner of securing leather soles; and it consists in forming the sole of india-rubber or similar water-proof compound with an edge of leather cemented around it.

To enable others skilled in the art to make and apply my improvement, I will proceed to fully describe my manner of so doing.

In describing my invention I use the word "boot" as including every description of boots or shoes.

I first construct a mold of the form and size required for the sole, whether it be for whole sole, Fig. 1, half-sole, Fig. 2, or heel, Fig. 1. I then take a narrow strip of sole-leather, place it in the mold around the edge, coating the inner edge of the said leather strip with the proper cement for uniting rubber to the leather. The cement I use is the common rubber cement, composed of about sixteen parts litharge, thirty-two parts india-rubber, one part sulphur, ground together and dissolved in camphene or benzine, one gallon to twelve pounds of the compound. I then fill the spaces within the said leather strip with india-rubber, clear, fabricated, or any of its compounds or equivalents therefor; then cure the said rubber, &c., in the usual manner, which completes the sole.

I cure my sole in similar manner as for curing common india-rubber—that is, while in the mold place them in an oven heated to about

260°, Fahrenheit's scale, for from six to eight hours.

To attach the sole thus prepared to boots, place the sole upon the boot in the usual manner for leather soles, the leather rim around the sole forming the edge, which may be stitched or pegged and finished in the usual manner.

India-rubber soles have long been used and applied to boots, depending wholly for their security upon the gum placed between the sole of the boot and the rubber sole. Thus applied, the soles frequently, and we might say generally, crack or peel from the sole—a great objection, which my invention entirely overcomes.

If in applying my improved sole it shall be deemed expedient to introduce gum between the rubber part of the sole and the sole of the boot, it may be done in the usual manner; but it is not essential.

The rubber may be, and I prefer to make it, a little thicker than its leather rim, as seen in Fig. 4.

The outer surface of the rubber part of the sole may be covered in whole or simply over the seam by thin rubber cloth or other material cemented on, and the joint may be a butt or a lap and butt one, and may be corrugated, roughened, or otherwise prepared to prevent slipping.

Having thus fully described my invention, I would state that I am aware that a sole has heretofore been made of three parts—viz., an india-rubber sole, a leather insole or lining, and a border or binding of leather, and cemented or sewed together; but such soles have not been found of sufficient resistance to wear to become useful. I lay no claim to any such sole; but

What I do claim, and desire to secure by Letters Patent, is—

A sole composed of an interior of rubber and a margin of sole-leather cemented together by a vertical butt-joint, and of uniform thickness, or nearly so, without an insole, and made substantially as herein described.

JOHN W. COBURN.

Witnesses:

JOHN E. EARLE,
MARY A. HINE.